

Installing the Easytherm Quick Start Guide



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Contents

1. Safety
2. Overview of the Easytherm boiler controller installation process
3. Tools and Equipment
4. Installing the backplate and cabling
5. Turning on the Easytherm for the first time
6. Connecting the Easytherm to a home router
7. Setting the Operating Mode, Froststat and Heating System Type
8. Installing and Configuring the Smartphone App

1. Safety

The Easytherm boiler controller must be installed by a suitably qualified person in accordance with the current edition of BS7671, the British Standard requirements for electrical installations (previously known as the IEE Wiring Regulations).

The connection between the Easytherm boiler controller and the mains electricity supply must be made via a fuse rated at not more than 6 Amps and a class 'A' switch (having contact separation of not less than 3mm in all poles). If your existing boiler installation does not provide this, it must be fitted, prior to installing the Easytherm.

Always fully isolate the mains electricity supply before commencing installation.

If you are intending to drill a hole to pass cables through a wall, always check that there are no cables or pipes buried within the wall first and locate the Easytherm a safe distance away.

If you are intending to mount the Easytherm on a metal surface, make sure that the metal surface is fully earthed.

Please do not locate the Easytherm where there is a risk of ingress of water into the Easytherm enclosure (eg as a result of boiler maintenance) or where the temperature is higher than normal ambient room temperature.

2. Overview of the Easytherm boiler controller installation process

Easytherm is installed in 4 distinct steps - these are summarised in the table, below:

Step	Description	Proof that it has worked
1.	Electrical Installation – Backplate, Wiring and Power On	Boiler Controller display lit and Status displayed on Easytherm LCD. Able to switch boiler ON / OFF via Boost / Override using a the menu on the Easytherm LCD display
2.	Establish Local WiFi Network Connection using EasyConfig (where the Easytherm temporarily becomes a WiFi access point, allowing very quick connection of a smartphone / pad etc for the purposes of configuring the Easytherm)	Able to log into Easytherm via browser and then make changes to the Easytherm Configuration web pages
3.	Configure customer WiFi network name (WiFi SSID) and WiFi password	Flashing 'Wireless Network Found Icon' shown on Easytherm LCD display
4.	Install App on Customer's smartphone or pad	Able to log into Customer's App and change Heating Programmes, ON / OFF times, etc.

Important Notes:-

This 'Installation Quick Start Guide' is suitable for the majority of Easytherm Installations. Please see the full 'Installing the Easytherm Manual on our website: www.easytherm.co.uk' for further details

Prior to installation, always check that there is a good WiFi signal where you wish to locate the Easytherm. This can be achieved by using a laptop, smartphone or tablet to access the internet at the location where you wish to install the Easytherm. Most of these devices have some form of WiFi strength indicator at the top or the bottom of the screen. Ensure that you have at least 30% of the full strength signal. If you are going to be installing Easytherms on a regular basis, it is worth using an App, such as WiFi Analyzser (free download to Android phones from Google Play) to check the signal strength and quality of the WiFi network.

3. Tools and Equipment

In addition to the normal tools required for any boiler programmer installation (eg screwdrivers, wire cutters and stripper, drill, spirit level, etc) you will also need the following:

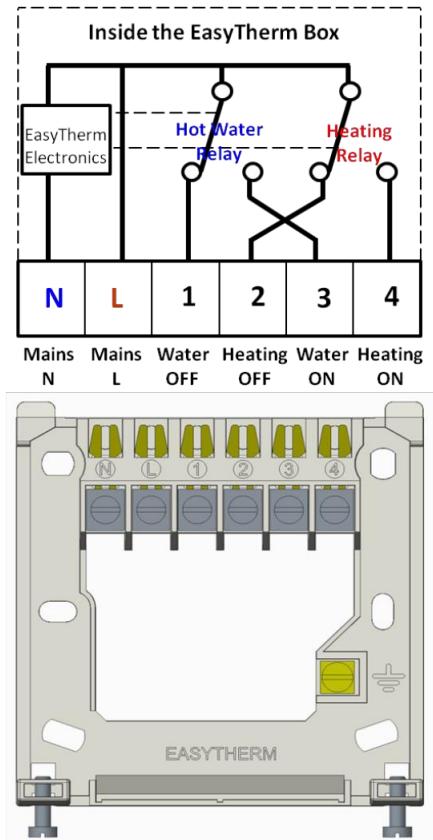
- A PC or Laptop with a WiFi connection (it is possible to use certain smartphones or tablets, although this document assumes the use of a PC or Laptop for the installation and configuration phase).
- The relevant WiFi Password to be able to attach to the home router
- In exceptional circumstances, you may need the router access administrator name and password to be able to access and modify settings within the router. NOTE you will probably only need this if the WiFi password has been lost, or the SSID/WiFi network name has been hidden.
- This manual, or the full Easytherm Installation Manual from www.easytherm.co.uk

4. Installing the Backplate and Cabling

Easytherm has been designed to allow the majority of existing UK boiler controllers / programmers to be easily replaced by the Easytherm, without the need to drill more holes or install additional cabling. To facilitate easy installation, a backplate is provided, which should be firmly attached to the wall at the selected location for the Easytherm - **Unless** an existing backplate is already fitted, which is compatible with and wired in exactly the same manner as the Universal Backplate supplied with the Easytherm.

It is the responsibility of the installer to ensure that backplates which are re-used from previous installations are compatible with the Easytherm backplate, wired in the correct manner and in a suitable condition for re-use.

Wiring Diagram for the Backplate

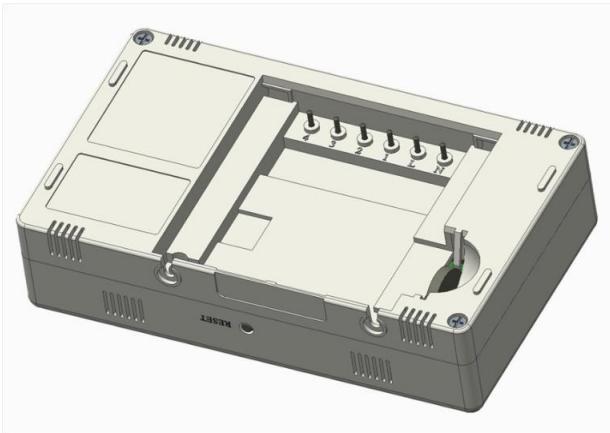
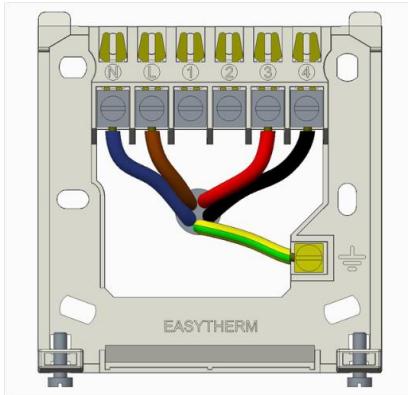


This diagram shows how the Heating and Hot Water relays inside the Easytherm relate to each position on the backplate.

Example of a correctly wired Backplate

Typical wiring for S Plan scheme. Red wire is Water ON. Black wire is Heat ON.

As shown in this diagram, the wires must be insulated up to the point where the wires enter the screw down connections.



Note- rear view of Easytherm showing 6 pins which mate with Backplate

Installing the Backplate and Cabling (Continued)

With the Backplate firmly fixed to the wall and the wiring completed, attach the Easytherm box to its backplate by hanging the top of the box onto the 2 plastic lugs provided on the top of the backplate and then swinging the Easytherm box down so that the 6 metal pins properly engage with the metal receptacle contacts on the Backplate. Once this has been done, tighten the 2 screws underneath the Easytherm box to fully secure the Easytherm to the Backplate. A good 'play' with the Easytherm box and backplate, prior to mounting will clarify the instructions above.

5. Turning on the Easytherm for the first time

When you have completed the cabling and you have attached the Easytherm to the Easytherm Backplate, make sure that all other aspects of the installation are safe (eg fit the boiler wiring junction box cover) and then apply power to the boiler system and the Easytherm via the isolating switch. You should now see the following start up message briefly appear on the Easytherm display:



Turning on the Easytherm for the first time (Continued)

Within a few seconds, the 'start up message' will disappear and the display will change to look similar to the display shown in the picture below. Don't worry too much if the time and day shown is wrong on your Easytherm - they will be automatically set to the correct time and day once the installation has been completed.



6. Connecting the Easytherm to a home router

Once the Easytherm has been connected to an electrical mains power supply, the Easytherm will need to be configured with the WiFi name (sometimes called an SSID) and WiFi password of the WiFi network to which you want to connect. You will also need to know whether the WiFi network is configured to use WPA, WPA2 or WEP security. Almost all WiFi networks are configured to use WPA or WPA2 and Easytherm is set to use either of these as default. Please see the full 'Installing The Easytherm Manual' at www.easytherm.co.uk, if you need more help / detail with WiFi connection.

The next step is to put this information into the Easytherm by putting the Easytherm into a configuration mode - known as Easyconfig.

Because there are so many different types of Laptop and Smartphone devices which an installer may choose to use to perform the configuration of Easytherm, it has been necessary to provide two different types of Easyconfig; Access Point Mode and Tether Mode.

When the Easytherm is in 'Access Point' Easyconfig mode, it creates its own WiFi network, just like a WiFi router and you can connect to this WiFi network using a laptop, pad or smartphone which supports WiFi. 'Access Point' Easyconfig mode works well for laptops and some devices such as the iPhone, iPod or iPad.

If you are using an Android device and you are having problems with 'Access Point' Easyconfig mode, it is worth trying 'Phone Tether' Easyconfig mode. Note: that only Android version 4 and above is supported by the Easytherm.

Once you have connected to the Easytherm in Easyconfig mode, you can open a browser on your laptop, pad or smartphone and go to the web configuration pages of the Easytherm and then configure the WiFi network name and password of the network that you want to connect to.

'Access Point' Easyconfig Mode

For the example shown over the next few pages, we have chosen a Microsoft Windows 7 laptop with WiFi. The same process has been tested and shown to work with Apple Mac laptops, iPhones and most Android phones. However, it is very important to note that Easyconfig does not work well if you are using a PC or Mac that is already connected to another network, e.g. via Ethernet. So, please disconnect all Ethernet and 3G connections, prior to starting the Easyconfig process.

Place the Easytherm into 'Access Point' Easyconfig mode by pressing and then holding down the UP arrow button and then momentarily pressing the small blue RESET button on the bottom of the Easytherm box. It is very important that the RESET button is pressed and released before you release the UP arrow. Locate your laptop or smartphone close to the Easytherm that you wish to configure, so that you can easily see the Easytherm LCD display.

Placing Easytherm into ‘Access Point’ EasyConfig Mode

1. Press UP arrow
Button
2. Then push and then release the Reset Button
(whilst Up arrow button is still pushed)
3. OR re-power EasyTherm
(whilst UP arrow button is still pushed)

The Easytherm LCD display will now look like the example shown below and the Easytherm will have created a WiFi network with the following settings:-

Network Name: Easytherm

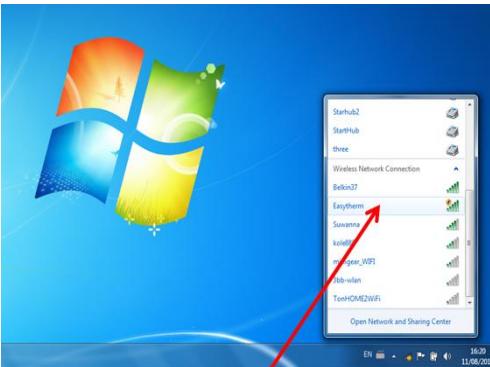
Network Password: (ie no password)

Network Security Type: None (ie no Security)



You should now be able to connect a laptop, smartphone or pad to the 'Easytherm' WiFi network, in the same way as you would connect to any WiFi network, with the exception that you do not have to enter a password. In some cases, you may find that the WiFi searching symbol, on your laptop or smartphone, never changes to the WiFi network found symbol. This should not present a problem and you can now move on to the next installation step.

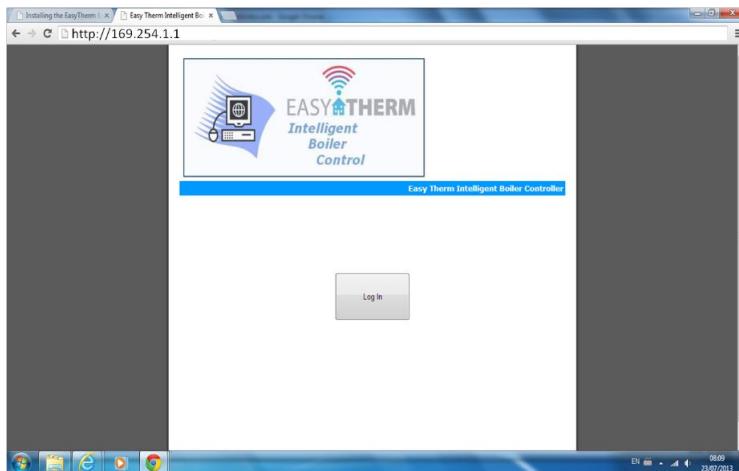
Example using a Windows 7 Laptop



NOTE: Occasionally, it may be necessary (particularly with Android devices) to assign a static IP address, before the 'Access Point' mode will work. On an Android Device, this can be done by going to 'Settings/WiFi' and then tapping on the 'Easytherm' network. Before clicking on the 'Connect' button, click on 'Show Advanced Options', then change 'IP Settings' to 'Static' and change the IP Address to 169.254.1.2 - then, click on the 'Connect' button. Your Android Smartphone will now have an address of 169.254.1.2 and the Easytherm will be 169.254.1.1.

Connecting the Easytherm WiFi to a home router (Continued)

It should now be possible to connect to the Easytherm by opening an internet browser and entering <http://169.254.1.1> into the address bar, as shown below. We have found that the Google Chrome or Safari browsers work well for this.



If you can see the Login Screen in your browser, you should now skip over the next section (Phone Tether) of the manual.

Note:- sometimes, the Login screen takes up to 30 seconds to appear. If you cannot see the Login screen, you should check that you have connected to the wifi network correctly (eg try clicking the Wireless Network icon in Windows and checking that the 'Easytherm' network is shown and is connected).

'Phone Tether' Easyconfig Mode

If you are using an Android Phone and have failed to make contact with Easytherm via the 'Access Point' Easyconfig mode, then you should try using 'Phone Tether' mode. The first step is to create a mobile WiFi hotspot from your Smartphone, with the following settings:-

Network Name (or SSID): Easytherm
Security: WPA2 PSK
Password: 87654321

Important Note:- Once we have completed the setup of the Easytherm, make sure to delete or change these hotspot settings, as the Password is not secure.

Using an Android device that supports Mobile Tethering, this is achieved by selecting: Settings/More Networks/Tethering and Portable Hotspot/Mobile hotspot and then pressing the 'Configure' button to allow the entry of the settings shown above. Once the hotspot is set up, place the Easytherm into Phone Tether mode – see below.



Your Easytherm will now look like this:



.... and it will be trying to join the hotspot that you have created on your phone.

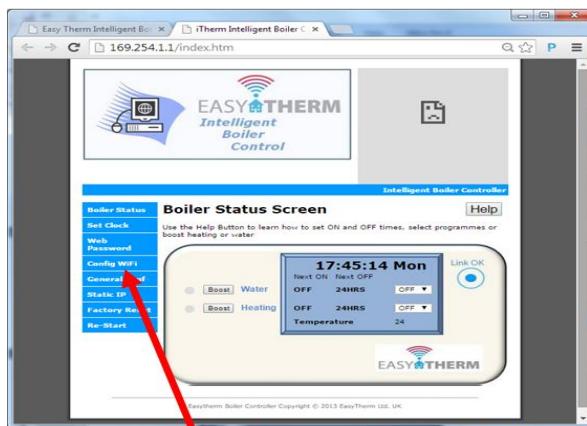
Important Note Your Easytherm has to do a lot of work to join a hotspot configured in this manner and it can take up to 90 seconds before the connection is made.

It should now be possible to connect to the Easytherm by opening an internet browser and entering the IP address shown at the bottom of the Easytherm LCD into the address bar (note that the IP address will initially be shown as 169.254.1.1 – but will then change, once your Easytherm has joined the hotspot. Make sure that you wait for this to happen) .

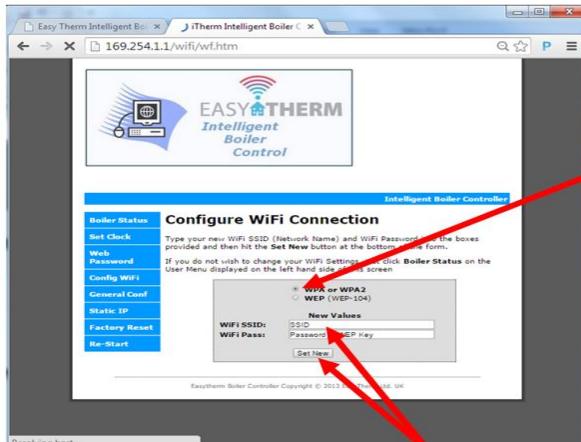
We have found that the Google Chrome browser works well for this on Android devices.

Connecting the Easytherm WiFi to a home router (Continued)

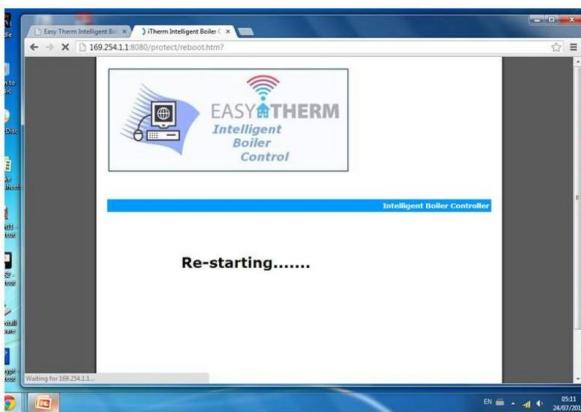
It is now time to Log In to the Easytherm, so that you can enter the correct Wireless Network Name (SSID) and Password that will allow the Easytherm to connect to the WiFi router.



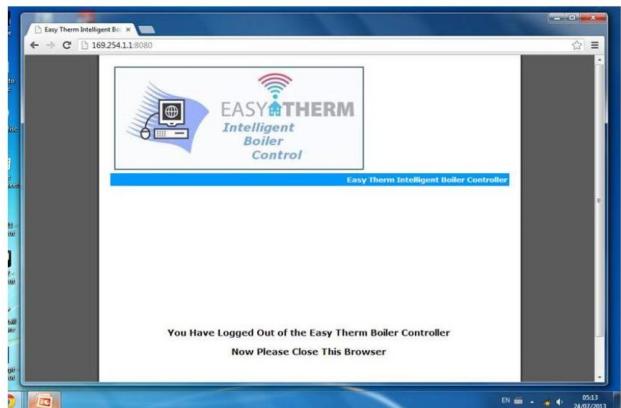
Click on the menu button for 'Config WiFi'



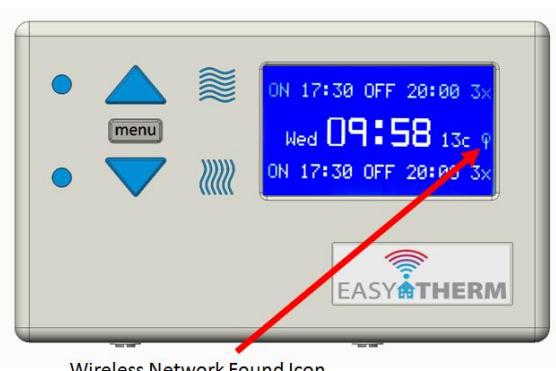
Enter your WiFi Network Name in the 'WiFi SSID' box and your WiFi Password in the 'WiFi Pass' box. Once you have done this – click on the 'Set New' button



Once you have pressed the 'Set New' button, you should see the EasyTherm 'Re-starting' message



After a few seconds, the 'Re-starting' message should be replaced with the message shown above
Please now CLOSE YOUR BROWSER



Wireless Network Found Icon

If the Easytherm is within wireless range of the home router and you have entered the correct Network Name and Password, after about 40 seconds, you should see the Wireless Network Found Icon start to flash once every second.

Connecting the Easytherm WiFi to a home router (Continued)

If the Wireless Network Found Icon does not appear:

- Check that you have entered the correct WiFi Network Name and Password, making sure that you have used capital and lower case letters, spaces, etc where required. You could try connecting another device (smartphone, laptop, pad, etc) to your home WiFi network to confirm that you have the network name and password correct.
- Check that the Easytherm is within wireless range of your home router, by taking a laptop, pad or smartphone to the location of the Boiler Controller and checking that you can browse the internet and checking that the Wireless Network Icon is showing plenty of wireless signal strength.
- Try re-powering or re-setting first the home router and then the Easytherm unit, allowing plenty of time (3 minutes) for the router to fully recover, before re-powering / re-setting the Easytherm.
- Check the 'WiFi :' line of the 'Show Network Info' screen on the Easytherm as shown in the last couple of pages, if it is stuck on "NoDHCP" then it is possible (although, very unlikely) that your home router has been configured not to use DHCP. This router setting will require changing if you persistently get the "NoDHCP" message. (For IP Experts - it is possible to set a static IP address, via the 'Config Network' option of the EasyConfig menu).

Meaning of the 'WiFi :' messages in the 'Show Network Info' screen:-

'WFScan' - searching for a wifi router, which usually takes about 35 secs after power on

'NoDHCP' - cannot find a DHCP IP address. Disappears after approx 1 second if all is OK

'No WiFi' - WiFi not found. WFScan will usually re-start in approx 15 seconds

'LinkOK' - WiFi successfully connected. Should see this approx 40 secs after power on/reset

'ET Home' - If WiFi OK, should flash every few seconds, indicating can see central server.

7. Setting the Operating Mode, Froststat and Heating System Type

During manufacture, the Easytherm is set to the most common (ie default) settings of:-

Operating Mode:- Programmer (other options 'Internal Thermostat' and 'WiFi Thermostat')

Heating System:- High Pressure (other option 'Gravity Fed')

Froststat:- Froststat Off (other option 'Froststat On')

If you wish to change these settings, please read the full 'Installing the Easytherm Manual', which you can obtain from www.easytherm.co.uk.

8. Installing and Configuring the Easytherm App

The procedure for installing the Easytherm App is shown on the next few pages - however, we shall start with a brief overview of compatible devices:

The Easytherm App has been developed using a new technology which allows a single App to run on a variety of different technologies and devices. Previously, it was necessary to create an App for iPhone users, an App for Android users and App for laptop users. Now, a single App can work for all of these devices, which simplifies installation and maintenance of the App software. However, there are some limitations, due to the 'newness' of this technology:-

- **iPhone** - App tested and works on the iPhone 4 and iPhone 5 using the Safari browser. Should be OK for iPhone 6. Where possible, IOS Version 8.1.1 (or above) should be used. Versions 6 and 7 of IOS should also be OK, but versions 8.0.x and version 5.x.x must **not** be used.
- **Android** - App works on Android 4.1 and above with Google Chrome. Probably OK for Android 4. Google Chrome browser version 31 or above should be used as the browser. The 'standard' Android browser must not be used. Most Android phones have the Google Chrome browser already installed, as well as the standard Android Browser.
- **Windows Phone** – the App should work using the Internet Explorer browser on the more recent Windows Phones

- Laptops - App works well on Windows 7 with Google Chrome 36 and probably works on Chrome 31 onwards. The App should work fine on recent Mac laptops, using the Safari browser.

1. Ask the customer for their chosen smartphone, pad or pc for installing the App onto and request that the customer log on to the device before handing it to you.
2. Open the selected browser (see the recommended browsers above).
3. Browse to the Easytherm website www.easytherm.co.uk
4. Scroll down to the bottom of the home page and then look for 'Useful Stuff'
5. Click on 'Download the Easytherm App'
6. You should see an 'Updating' prompt appear in the browser window and after a few seconds, the front screen of the App (shown below) should appear. Wait for the 'Updating' message to disappear before moving to the next step.
7. Once the 'Updating' prompt disappears, the App must be installed on the Home screen of the Smartphone. Follow the steps below:-

For iPhones:-

Look for an icon, which looks like a square box with an arrow coming out of the top of it, on the bar at the bottom of your browser window – touch on it and you will be given a number of options, one of which will be 'Add to Home Screen' – press this and follow the instructions.

For Android Phones:-

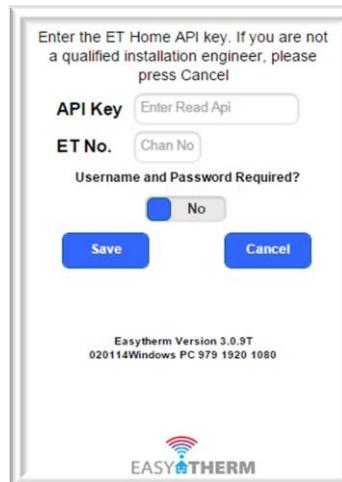
Select the 'menu' button (usually on the bottom left on most Android phones) and then select 'Add to Home Screen' from the menu and follow the instructions. You should now see the

Easytherm launch icon appear on the Home screen of your iPhone or Android phone. Click on this icon in the normal way to launch the Easytherm App and you should see the 'Connect' screen appear, as shown on the next page.

8. It will now be necessary to reveal the 'secret screen' which is used to personalise the App for each customer and connect the App to the Easytherm, via the Easytherm central server. See diagram below:



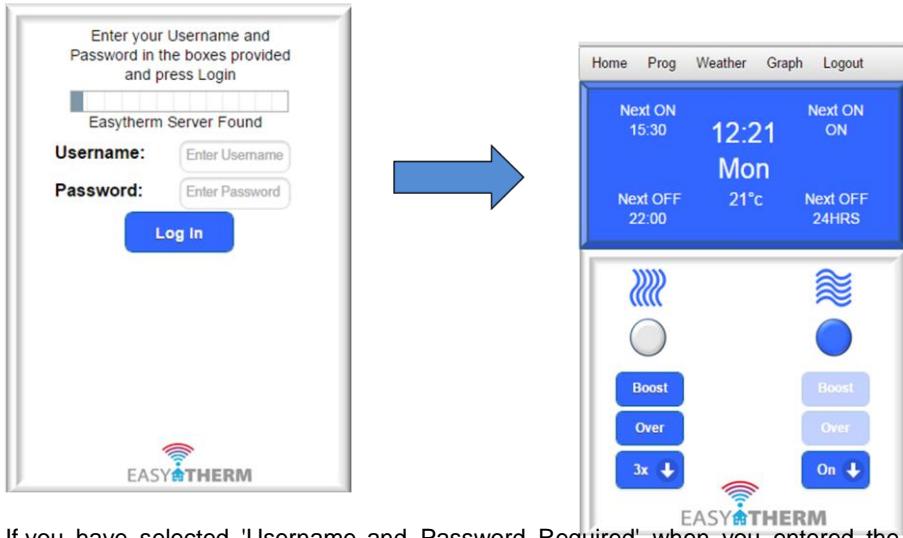
9. You should see the API Key configuration screen appear, as shown below.
10. Please copy the API Key numbers and their associated Easytherm Numbers from the sticky label on the Easytherm enclosure into the fields, as shown below. Once this is done, select whether the customer wants to have to enter a Username and Password each time they use the App, or not - and then press the 'Save' button to save everything. Note: if the customer already has some form of access protection for their smartphone then it is probably safe to select 'No' for 'Username and Password Required?' question.



11. Once 'Save' has been pressed, the App should revert to the 'Connect' screen, as shown below. When you click the 'Connect' button, the 'Easytherm Server Found' message should appear within a few seconds, if you have put the API Keys in correctly and the smartphone is connected to the internet.

If the 'Easytherm Server Found' screen does not appear, double check that the device on which you are installing the App is connected to the internet (eg try opening a browser and going

to somewhere like www.bbc.co.uk). Also, check that there are no letter 'O' s in the API Key, which have been incorrectly entered as zeros (0). Do the same for the letter 'I' and the number '1'.



12. If you have selected 'Username and Password Required' when you entered the API key, you will need to enter log in using:-

Username = "Username"

Password = "Password"

then press the Log In button, as shown on the previous page - if not, just press the Log In button.

13. The main App Home screen should appear, as shown below. Please now switch to the User Manual to undertake the final steps of configuration, such as setting up a secure Username and Password and setting Heat and Hot Water on-off times.

Set to 'Programmer' in EasyConfig



Set to 'Thermostat' in EasyConfig

